CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

CLEANUP AND ABATEMENT ORDER NO. 99-26

FORMER SANTA YSABEL CHEVRON SERVICE STATION
30350 HIGHWAY 78, SANTA YSABEL
SAN DIEGO COUNTY

The California Regional Water Quality Control Board, San Diego Region (hereinafter RWQCB) finds that:

1. The site (former Santa Ysabel Chevron Service Station), located at 30350 Highway 78, Santa Ysabel, San Diego County, became a fuel service station in the early 1930's and continued operation until approximately 1996. Mr. Earnest and Joyce Moretti acquired the property in November of 1980, and subsequently leased out the property and the underground storage tank system (UST). Petroleum products (wastes) have leaked from the UST system, including gasoline and the petroleum hydrocarbons used to formulate gasoline {e.g. Methyl tertiary-butyl ether (MTBE)}, and have been discharged to ground water and deposited in soil from which they probably will be discharged to ground water. The discharge caused the concentration of gasoline constituents in ground water at the site to exceed applicable water quality objectives for the use of the water for domestic and municipal supply, creating a condition of pollution.

2. The site is located in the Witch Creek Hydrologic Subarea (HSA 5.54) of the Santa Ysabel Hyrologic Area located in the San Dieguito River Watershed. Ground water in this area is designated as having beneficial uses including domestic and municipal water supply. Water Quality objectives for the use of water as a domestic and municipal supply are based on primary and secondary maximum contaminant levels (MCLs) established by the Department of Health Services (22 CCR 64444 & 64449). Primary MCLs include consideration of health risks, the technical feasibility of meeting the MCL, and costs associated with compliance (in terms of monitoring and water treatment requirements). Secondary MCLs address "aesthetic" qualities of drinking water supplies. Primary and secondary MCLs (reported in µg/L) for major constituents of gasoline are:

Constituent	Primary MCL (µg/L)	Secondary MCL (µg/L)
Benzene	1	N/A
Toluene	150	40
Ethylbenzene	700	30
Total Xylenes	1,750	20
MTBE	*	5

* The MCL is currently under development by the California Department of Health Services (DHS). The Public Health Goal (PHG) has been adopted at 13-ppb for MTBE.

3. As of May 6, 1999, the maximum concentrations of gasoline constituents in ground water measured at the site were:

Organic Constituents	Concentration (µg/L)
Benzene	15,247 (MW-1)
Toluene	26,181 (MW-1)
Ethylbenzene	3,887 (MW-1)
Total Xylenes	15,330 (MW-1)
Total Petroleum Hydrocarbons TPH (quantified as gasoline)	126,567 (MW-1)
Methyl tertiary-butyl ether (MTBE)	1,389 (MW-3)

4. On March 15, 1999 a preliminary site assessment report was completed for the site. This phase of the investigation included installation of on-site soil borings and shallow ground water monitoring wells.

5. The RWQCB is entitled to, and may, seek reimbursement for all reasonable costs actually incurred by the RWQCB to investigate unauthorized discharges of waste and oversee cleanup of such waste, abatement of the effects thereof, or other

remedial action required by this cleanup and abatement order. Reimbursable costs may include costs incurred by the RWQCB following **October 19, 1997.**

6. This enforcement action is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000 et seq.) in accordance with Section 15321, Chapter 3, Title 14, California Code of Regulations.

IT IS HEREBY ORDERED, that pursuant to Section 13304 of the California Water Code, Mr. Earnest and Joyce Moretti (hereinafter the *"discharger"*) shall comply with the following:

INTERIM REMEDIAL ACTION

1. The discharger shall implement interim remedial measures as necessary, to abate or correct the actual or potential effects of the unauthorized release. Interim remedial actions can occur concurrently with any phase of corrective action. The discharger shall give 48-hour prior notification to the Regional Board Executive Officer of any proposed interim remedial actions that will be undertaken. Interim remedial actions include, but not limited to the following:

   a.) Remove free petroleum product from the water table as necessary as required by the California Code of Regulations (CCR), Title 23, Division 3, Chapter 16, Article 5 (Section 2655) and Article 11 (Section 2722(b));

   b.) Excavate and dispose of contaminated soil;

   c.) Excavate and treatment of contaminated soil;

   d.) Vacuum extraction of contaminants from soil or ground water;

   e.) Pumping and treatment of ground water to remove dissolved contaminants; and

   f.) Enhance biodegradation to promote bacterial decomposition of contaminants.

Before taking interim remedial action, the discharger shall notify the Regional Board Executive Officer in writing of the proposed action, and shall comply with any appropriate requirements.

2. Underground storage tanks that have been identified in previous investigations shall be removed within 30 days of the issuance of this Order.

SOIL AND GROUND WATER INVESTIGATION

3. The discharger shall submit a workplan to complete a comprehensive soil and water investigation report by **October 30, 1999.** The results of the soil and water investigation report must be adequate to determine the source, nature and extent (both vertical and lateral) of the discharge, with sufficient detail to provide the basis for decisions regarding subsequent cleanup and abatement actions. Within 30 days of the receipt of workplan approval from the Regional Board Executive Office the discharger shall begin implementation of the workplan.

CORRECTIVE ACTION

4. Using information obtained during the investigation, the discharger shall propose a Corrective Action Plan (CAP). The CAP must be cost-effective, protect human health, safety and the environment, and restore or protect current or potential beneficial uses of the ground water, as required by the California Code of Regulations (CCR), Title 23, Division 3, Chapter 16, Article 11 (Section 2725). The discharger shall submit a Corrective Action Plan by **May 30, 2000** containing the elements listed below.

   a) An assessment of the impacts listed in Directive 5 of this Order; and

   b) A feasibility study and the evaluation of alternative cleanup levels should contain the information described in Directive 6 of this Order.

5. The assessment of impact study described in Directive 4a shall contain the following information:

   a) Ground Water Impact Assessment

      1) The physical and chemical characteristics of the substance discharged, including its toxicity, persistence and potential for migration in water, soil and air; and

      2) The results of a soil and water investigation, including the collection and analysis of data necessary, to assess the nature and vertical and lateral extent of the discharge. Determine the spatial distribution

of and concentration of each constituent of concern throughout the zone affected by the release; and

3) The hydrogeological characteristics of the site and the surrounding area where the discharge has migrated or may migrate; and

4) The existing quality of ground water, and the current and potential beneficial uses of these waters. The results of a ground water user survey describing the location of all wells within one-mile radius of the site. The survey must include the names and addresses of the well owners, direction of flow, construction of wells, the use and withdrawal rate of each well; and

5) The potential for health effects caused by human exposure to the waste constituents; and

6) The potential damage to wildlife, crops, vegetation and physical structures caused by exposure to waste constituents; and

7) The persistence and permanence of the adverse effects.

b) Surface Water Impact Assessment

1) The patterns of precipitation in the region; and

2) The proximity of the discharge plume to surface waters; and

3) The current and potential future uses of surface waters in the area.

6. The feasibility study described in Directive 4b shall contain an evaluation of alternatives for cleanup of soil and ground water. The evaluation shall include the following elements:

a) An evaluation of the effectiveness, feasibility and cost of at least two alternatives to attain background ground water quality for the following minimum constituents:

Constituents

Total Petroleum Hydrocarbons
Benzene

Toluene
Total Xylenes
Ethylbenzene
Methyl tertiary-butyl ether (MTBE)

b) An evaluation of the effectiveness, feasibility and cost of at least two alternatives to attain the following primary and secondary MCL ground water quality cleanup levels:

Constituents	Cleanup Level
Total Petroleum Hydrocarbons	5 µg/l
Benzene	1 µg/l
Toluene	40 µg/l
Total Xylenes	20 µg/l
Ethylbenzene	30 µg/l
Methyl tertiary-butyl ether (MTBE)	5 µg/l

c) A comprehensive description of the cleanup and abatement activities associated with each alternative.

d) A proposed time schedule, including interim milestone dates for completion of each alternative.

e) A recommended cleanup alternative for each cleanup level and a commitment to implement the recommended alternative.

f) In developing the cleanup alternatives the discharger shall consider the following cleanup and abatement methods or combinations thereof, to the extent that they may be applicable to the discharge or threat thereof.

A. Source removal and/or isolation
B. In-place treatment of soil and water
C. Bioremediation
D. Aeration
E. Fixation
F. Excavation or extraction of soil or water for on-site or off-site treatment by the following techniques:

1. Bioremediation
2. Thermal destruction

3. Aeratio
4. Sorption
5. Precipitation, flocculation, and sedimentation
6. Filtration
7. Fixation
8. Evaporation

g) An excavation or extraction plan for soil or water to appropriately recycle, re-use, or dispose of waste material.

7. Based upon review of the Corrective Action Plan (CAP) the Regional Board Executive Officer will amend this cleanup and abatement order to identify the final ground water and soil cleanup levels to be attained at the site and an appropriate compliance time schedule. In the interest of minimizing environmental contamination and promoting prompt cleanup, the discharger may begin implementation of the CAP sixty (60) days after submittal to the Executive Officer, unless the discharger is directed otherwise by the Regional Board Executive Officer. Before implementation of the cleanup alternative the discharger shall:

a) Notify the Regional Board Executive Officer in writing by registered mail of its intention to begin cleanup; and

b) Comply with any conditions set by the Regional Board Executive Officer, including mitigation of any adverse consequences from cleanup activities; and

c) Submit a health and safety plan for the approved Corrective Action Plan alternative.

GROUND WATER MONITORING

8. The discharger shall immediately implement quarterly ground water monitoring of all monitoring wells at the site to identify constituents of concern (CoC). The initial minimum ground water analysis shall include the following: Benzene, Toluene, Ethylbenzene, total Xylenes, total Petroleum Hydrocarbons, Methanol, Ethanol, Tertiary Butyl Alcohol (TBA), Tertiary Butanol, Methyl tertiary Butyl Ether (MTBE), Di-isopropyl ether (DIPE), Ethyl Tertiary Butyl Ether (ETBE), Tertiary Amyl Methyl Ether (TAME), total Lead, Ethylene Dibromide (EDB), and Ethylene Dichloride.

9. The discharger shall submit a Water Quality Monitoring Program by **November 30, 1999.** The Water Quality Monitoring Plan shall address and/or conform to the following criteria:

Monitoring Wells:

a) All monitoring wells for the Water Quality Monitoring Program shall be designed and certified by a registered geologist or civil engineer.

b) All monitoring wells and all other borings drilled to satisfy the Water Quality Monitoring Program should be logged during drilling under the direct supervision of a registered geologist. The drilling logs shall be submitted to the Regional Board Executive Officer upon completion of drilling. Copies of all driller's logs, which the Department of Water Resources requires to be submitted under Water Code Section 13751, shall be submitted to the Regional Executive Officer.

c) Soil shall be described in the geologic log according to the Unified Soil Classification System as presented in Geotechnical Branch Training Manuals published by the United States Bureau of Reclamation.

d) Rock shall be described in the geologic log in a manner appropriate for the investigation.

e) The Water Quality Monitoring Program shall include a sufficient number of background monitoring points installed at appropriate locations and depths to yield ground water samples from both the uppermost aquifer and the aquifer in use. The background monitoring points should represent the quality of ground water that has not been affected by the discharge.

f) The Water Quality Monitoring Program shall include a sufficient number of monitoring points installed at appropriate locations and depths to yield ground water samples from both the uppermost aquifer and the aquifer in use. These monitoring points should represent the quality of ground water passing the point of compliance to provide the data needed to evaluate changes in water quality due to the discharge.

g) All monitoring wells shall be cased and constructed in a manner that maintains the integrity of the monitoring well bore hole and prevents the bore hole from acting as a conduit for contaminant transport.

h) The sampling interval of each monitoring well shall be appropriately screened and fitted with an appropriate filter pack to enable collection of representative ground water samples.

i) For each monitoring well, the annular space (i.e., the space between the borehole and well casing) shall be appropriately sealed to prevent entry of contaminants.

Water Quality Sampling:

j) The Water Quality Monitoring Program shall include consistent sampling and analytical procedures that are designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points and background monitoring points. At a minimum the program shall include a detailed description of the procedures and techniques for:

1) Sample collection (e.g. purging techniques, sampling equipment, and decontamination of sampling equipment); and

2) Sample preservation and shipment; and

3) Analytical procedures; and

4) Chain of custody control.

k) Ground water sampling shall be scheduled to include the times of expected highest and lowest elevation of the potentiometric surface. The sampling method shall assure to the greatest extent possible that independent samples are obtained.

l) All monitoring wells shall be adequately developed to enable a collection of representative ground water samples.

m) The Water Quality Monitoring Program shall include an accurate determination of the ground water elevation and field parameters (temperature, electrical conductivity, turbidity and pH) at each well each time ground water is sampled.

n) Graphs of all analytical data, from each monitoring point and background monitoring point shall be submitted. Graphs shall be at a scale appropriate to show trends or variations in water quality. All graphs for a given

constituent shall be plotted on the same scale to facilitate visual comparison of monitoring data. Unless the discharger receives written approval from the Regional Board Executive Officer to use an alternate procedure that more effectively illustrates trends or variations in the data.

10. The discharger shall submit quarterly progress reports containing the following information:

    a) Water quality sample results from monitoring locations designated in the Water Quality Monitoring Program approved by the Regional Board Executive Officer.

    b) Graphs of all analytical data, from each monitoring point and background monitoring point shall be submitted.

    d) A statistical evaluation of the water quality monitoring results.

    e) Maps of the site showing all monitoring locations; water level elevation and contours; and concentration contours of major contaminants.

    e) A detailed discussion of the progress in the implementation of any interim remedial action or other corrective action.

11. The discharger shall properly manage, treat and/or dispose of wastes generated by cleanup and abatement activities, including soil containing residual petroleum hydrocarbons in accordance with applicable federal, state and local regulations. The discharge of waste that could affect the quality of waters of the state is prohibited unless the discharger has complied with California Water Code (CWC) Section 13260 and the RWQCB has issued waste discharge requirements under CWC 13263, or waive requirements under CWC 13269.

12. The discharger shall ensure that:

    a) All plans and reports required under this cleanup and abatement order are prepared by professionals qualified to prepare such reports. Professionals should be qualified, licensed where applicable, and competent and proficient in the fields pertinent to the required activities. California Business and Professions Code Sections 6735, 7835, and 7835.1 require that engineering and geologic evaluations and judgements be performed by or under the direction of registered professionals.

b) All components of investigative and cleanup and abatement actions required under this order are conducted under the direction of appropriately qualified professionals.

c) A statement of qualifications of the responsible lead professionals shall be included in all plans and reports submitted to the Regional Board. Plans and reports which do not contain this statement will be deemed incomplete by the Regional Board Executive Officer for the purpose of compliance with this cleanup and abatement order.

13. Neither the treatment nor the discharge of wastes shall create a condition of pollution or nuisance as defined in Section 13050, Division 7 of the California Water Code.

14. Failure to submit technical reports required under this cleanup and abatement order may result in the imposition of civil liabilities under the California Water Code Section 13308(b) in an amount not to exceed ten thousand dollars ($10,000) for each day in which the violation occurs.

REPORTING REQUIREMENTS

15. A letter of transmittal shall accompany each technical report submitted in compliance with the directives of this Order. The letter shall discuss the essential points in the attached technical report. The letter of transmittal shall be signed by the duly authorized representative of those entities identified as "the discharger" in this Order. In the cover letter, the discharger shall provide a certification that under penalty of perjury under the laws of California that any monitoring data reported to the Regional Board are known to the discharger to be true and correct.

The ground water monitoring reports shall contain analytical results for samples collected from all ground water monitoring wells identified in an approved work plan. Analytical results for the following fuel constituents, using the specified laboratory test methods, shall be tabulated in the report:

CONSTITUENT(S)	EPA TEST METHOD
Total Petroleum Hydrocarbons	TPH-DHS Method or EPA Method 8015
Volatile Aromatic Hydrocarbons (Benzene, Toluene, Ethylbenzene, and Total Xylenes)	EPA Method 8260 or EPA Method 8020.
Methyl-tertiary-butyl-ether (MTBE)	EPA Method 8260

16. The discharger shall submit ground water monitoring reports to the RWQCB in accordance with the following schedule:

REPORT	SAMPLING PERIOD	DUE DATE
Quarterly	January, February, March	April 30
	April, May, June	July 30
	July, August, September	October 30
	October, November December	January 30

NOTIFICATIONS

17. Before implementation of any approved remediation work plan and/or Corrective Action Plan, the discharger shall:

a) Notify the RWQCB in writing, by registered mail, of their intention to begin cleanup in accordance with the approved remedial alternative(s); and

b) Comply with any conditions set by the RWQCB, including mitigation of any adverse consequences from cleanup and abatement activities.

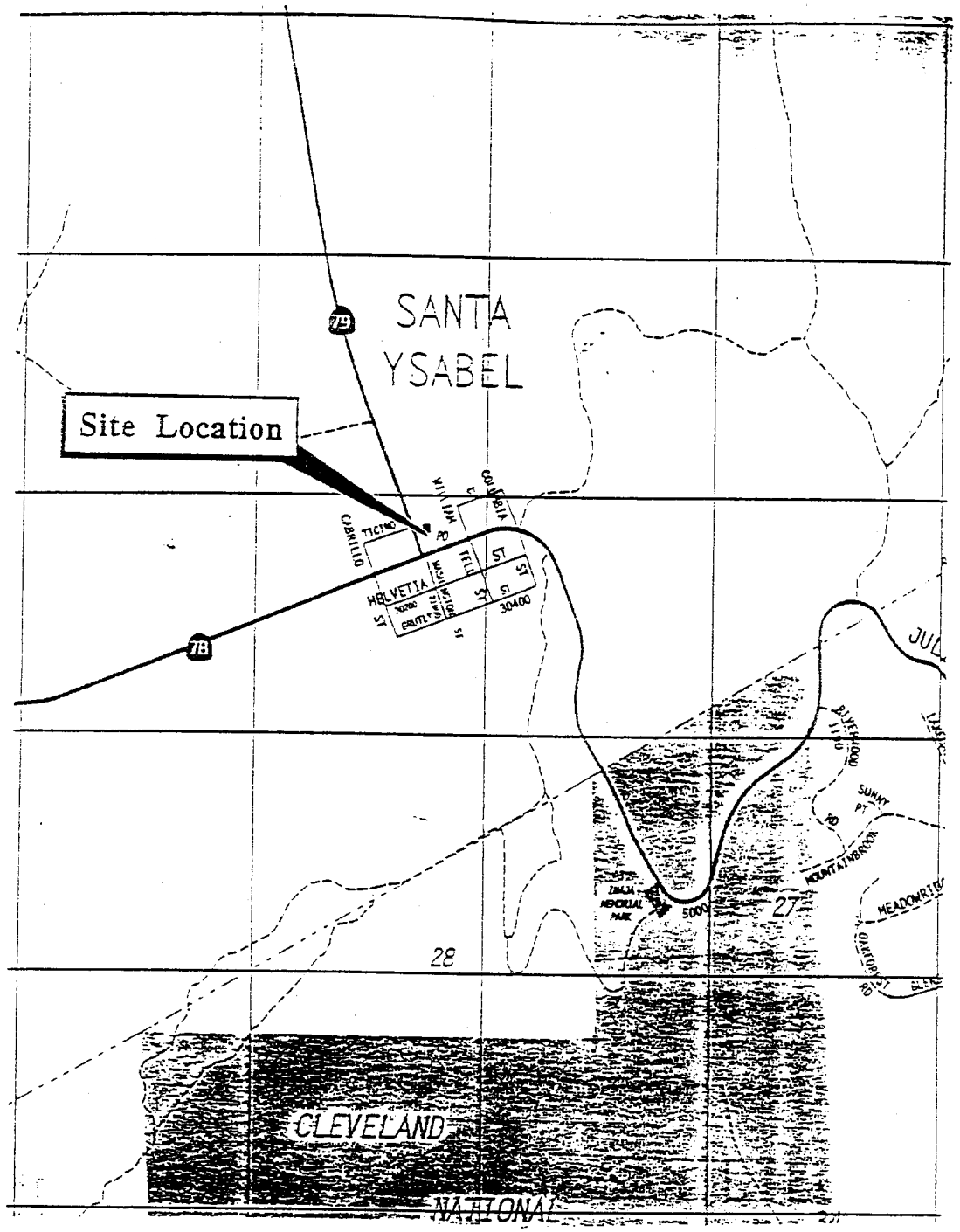
The discharger shall modify or suspend cleanup activities when directed to do so by the RWQCB.

18. The discharger must notify the RWQCB within 24-hours of any condition created by the discharge of wastes to land or water resources at the site. The initial

notification must be followed by a detailed written description of the discharge, an explanation of the conditions which lead to the discharge of wastes, and the emergency remedial actions implemented to mitigate the effects of the discharge. The written notification shall be sent to the RWQCB by registered mail.

JOHN H. ROBERTUS
Executive Officer

Date Issued: September 15, 1999



Reference:
Map section excerpted from The Thomas Guide - San Diego County Street Guide and Directory (1999)- page 1135.

0 1900 3800

(Approximate Scale in Feet)

Site Location Map	Project No.
Former Chevron Service Station 30350 Highway 78 Santa Ysabel, California	971174.1 Figure 1